HATCH TENSION ROD / LATCH R&R

OBJECTIVE:
Remove and replace tension rod / latch assembly

LOCATION:
Installed: U.S. Common Hatch Rib Side
Stowed: √ Maint Dbase

DURATION:
25 min

PARTS:
Hatch tension rod assembly (PN 683-13012-1)

MATERIALS:
None

TOOLS REQD:
KIT A:
7/16" Combination Wrench
9/16" Combination Wrench
9/16" Crowfoot, 3/8" Drive
KIT C:
1/2" Socket, 3/8" Drive
KIT D:
1/8" Hex Head, 3/8" Drive
KIT E:
Ratchet 3/8" Drive
1/4"-3/8" Adapter
4” Ext 3/8” Drive
KIT G:
(30-200 in-lbs)Trq Wrench, 3/8” Drive
(5-35 in-lbs)Trq Driver, 1/4" Drive
KIT J:
Retaining Ring Tool Straight
IVA Tool Box, Lid #1:
Nonmetallic Feeler Gauge
Caliper, Dial Type

REFERENCED PROC(S):
LCN S9ASHA, Task GBCOAAA

WARNING

To ensure crew members have immediate ingress/egress between modules in case of emergency, hatch latches can not be engaged

NOTE

Tension rod assembly and latch assembly remain together and are moved to maintenance work area for separation, because of small parts.

REMOVE

1. Close, do not latch hatch.
2. Unfasten captive fasteners (four)(Ratchet 3/8” Drive)(1/2” Socket)(4” Ext).
3. Release quick release pin (one) securing failed tension rod assembly to slider.
4. Place failed tension rod in maintenance work area.
5. Remove retaining ring from pin (Retaining ring pliers).
6. Remove pin (one) securing tension rod to latch.
7. Separate tension rod, latch.
8. Replace failed part with new tension rod/latch depending on which part has failed.
9. Insert pin into aligned tension rod/latch.
10. Install retaining ring onto end of pin(Retaining ring pliers).

REPLACE

11. Position latch assembly onto hatch plate.
12. Hand tighten captive fasteners(four). Torque fasteners(four) to 188 ±15 in-lbs.((30-200 in-lbs)Trq Wrench, Ratchet 3/8” Drive, 1/2” Socket, 4” Ext).

13. Align tension rod to slider hole, insert quick disconnect pin.

> NOTE
> Hatch should be in fully unlatched position before continuing with procedure. Failure to do so may result in improper latch adjustment.

14. Rotate set screw on top of latch clockwise until it stops(Ratchet 3/8" Drive)(1/8" Hex Head).

15. Loosen jam nut on tension rod(9/16" Combination Wrench).

16. Find dead center point of latch travel by rotating tension rod CCW until vertical movement of latch roller reverses direction(7/16" Combination Wrench).

17. Rotate tension rod CW until latch roller begins to move away from hatch plate.

18. Verify that the gap between the latch roller and hatch plate does not exceed .0015 (Feeler Gauge).

19. If gap is per requirements, continue with maintenance procedure.

20. If not set per requirements, reposition roller to gap measurement.

21. Tighten jam nut on tension rod.

22. Torque jamnut to 20 $\pm$ 2 in-lbs(5 - 35 in-lbs) Trq Driver, 1/4" to 3/8" Adapter, 9/16" Crowfoot.

23. Adjust setscrews to achieve 1.100/1.050" dimension between hatch plate and nearest point of latch roller(1/8" Hex Head).

24. Verify measurement (Caliper).

25. If gap is per requirements, continue procedure.

26. If gap is not per requirements, reposition latch assembly to proper gap measurement(1/8" Hex Head).

27. Measure length of an adjacent tension rod shaft from base of jam nut to edge of latch attach bracket (Caliper).

28. If lengths are not equal ±.050", readjust tension rod.

29. If lengths are equal ±.050", continue procedure.

30. Turn crank to ensure proper operation of hatch.

31. Latch hatch to check seal gap in accordance with LCN S9ASHA, Task GBCOAAA.

POST MAINTENANCE

32. If gap is per requirement continue procedure.

33. If gap is not per requirement gap in accordance with LCN S9ASHA, Task GBCOAAA.

34. Stow failed tension/latch assembly, tools and maintenance supplies.

35. Update Main Dbase.